Variables	Univariate analysis			Multivariate analysis		
	Odd ratio	95% CI	P-value	Odd ratio	95% CI	P-value
Age	0.998	0.966 ~ 1.031	0.905			
Male gender	0.816	0.377 ~ 1.764	0.605			
Hypertension	3.141	0.935 ~ 10.549	0.064			
Diabetes	2.211	1.075 ~ 4.546	0.031			
Current smoker	1.309	0.665 ~ 2.578	0.436			
Old myocardial infarction	1.385	0.703 ~ 2.728	0.347			
Heart failure	1.971	0.953 ~ 4.075	0.067			
ESRD on maintenance hemodialysis	2.523	1.242 ~ 5.126	0.010	2.194	1.062 ~ 4.531	0.034
Ostial lesion	2.664	1.338 ~ 5.303	0.005	2.374	1.176 ~ 4.792	0.016
Left main bifurcation	2.336	1.104 ~ 4943	0.027			
Previous stent as Drug eluting stent	1.673	0.845 ~ 3.312	0.140			
Pre-PCI stenosis	1.027	1.000 ~ .054	0.053			
IVUS use	0.621	0.283 ~ 1.362	0.234			

CONCLUSIONS ESRD on maintenance hemodialysis and coronary ostial lesion were independent predictors of repeat in-stent restenosis after DEB use.

CATEGORIES CORONARY: Drug-Eluting Balloons and Local Drug Delivery

KEYWORDS Coronary revascularization, Drug-eluting balloon

TCT-407

Anatomical And Physiological Changes After Paclitaxel-Coated Balloon For Atherosclerotic De Novo Coronary Lesions: Serial IVUS-VH And FFR study

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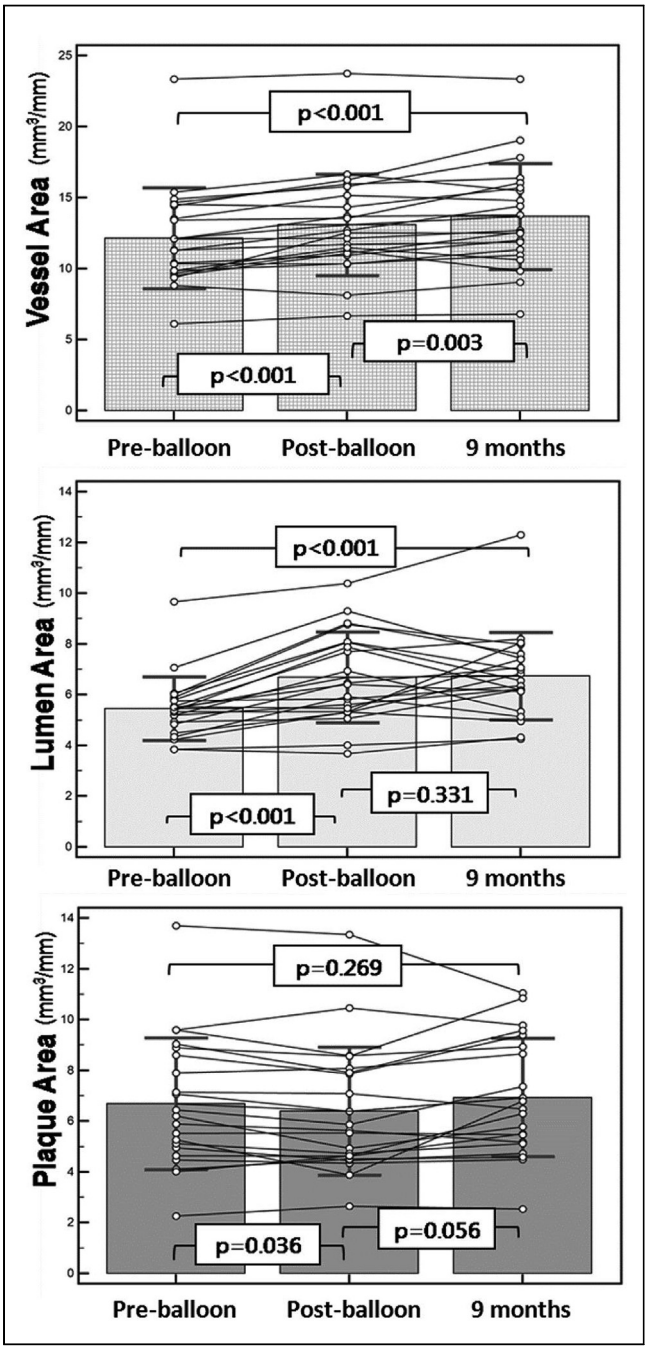
BACKGROUND The purpose of this study is to assess the vascular response of de novo coronary lesions treated with paclitaxel-coated balloon (PCB) using intravascular ultrasound virtual histology (IVUS-VH) and fractional flow reserve (FFR).

METHODS This prospective observational study enrolled 27 patients with coronary artery disease treated with PCB who underwent coronary angiography, IVUS-VH and FFR before, immediately after intervention and at 9 months. 28 de novo lesions were successfully treated with PCB.

RESULTS Angiographic late luminal loss was 0.02 ± 0.27mm. Mean vessel and lumen areas showed increase at 9 months (12.0 ± 3.5mm2 to 13.2 ± 3.9mm2, p <0.001; and 5.4 ± 1.2mm2 to 6.5 ± 1.8mm2, p <0.001, respectively). Although mean plaque area was unchanged (6.6 ± 2.6mm2 to 6.6 ± 2.4mm2, p = 0.269), plaque burden decreased significantly (53.4 ± 7.9% to 49.5 ± 6.4%, p = 0.002). The proportion of all four plaque compositions by IVUS-VH was unchanged at 9 months. The FFR of the treated lesion was 0.71 ± 0.13 pre-procedure, 0.87 ± 0.06 post-procedure and 0.84 ± 0.06 at follow-up.



CONCLUSIONS De novo coronary lesions treated with PCB showed persistent anatomical and physiological patency with plaque redistribution and vessel remodeling without chronic elastic recoil or plaque compositional change during follow-up.

CATEGORIES CORONARY: Drug-Eluting Balloons and Local Drug Delivery

KEYWORDS Drug-eluting stent, paclitaxel, Fractional flow reserve, IVUS